UNITED STATES DEPARTMENT OF AGRICULTURE

Extension Service
Office of Exhibits

A Summary of the Exhibit

ELIMINATE IMPACT

A booth exhibit showing the destructive force of the impact or hammering of the wheels of vehicles and how it may be overcome.

Specifications

Floor space - - - - - - - - 8'6" front,5'3"
Wall space - - - - - - - - None. (deep.
Shipping weight - - - - - 525 lbs.
Electrical requirements - 110 volt AC. current. About 500 watts for small motor.

ELIMINATE IMPACT

How It Looks

This exhibit consists of a booth, 8'-6" across the front, 5'-3" deep, and 7¼' high, and a small electrically driven model mounted on a pedestal in the front of the booth.

Attention is first drawn to the exhibit by the noise caused by a model wheel, mounted on a wooden base, being raised and dropped on the pavement at intevals by a small electric motor. The hammering of this wheel immediately interests the viewer in the subject of impact which is the main object of the exhibit.

Large letters on the center section direct the attention to the noise of the impact-reproducing machine, tell what the noise means and, give the remedy for eliminating impact.

On the left section is a painting of an automobile demonstrating the need of smooth roads. On the right section are photographs of two automobile tires, one a pneumatic, and the other a worn, solid tire, and text explaining the amount of impact when these types of tires are used.

What It Tells

The impact or hammering of the wheels of vehicles upon road surfaces has been advanced as the most destructive force to which modern highways are subjected. Almost everyone at some time has observed the rapid and progressive disintegration of a pavement resulting from what was at the beginning a small hole or depression.

Impact may be overcome by making the road surfaces smooth by a better distribution of the load to the truck wheels by eliminating motor truck overloading and by using pneumatic tires. The picture on the left panel illustrates that a one quarter inch drop at the joint of a concrete pavement calls for an extra inch in the thickness of the slab. The exhibit pictures the impact resulting from worn tires. The greatest im-

pact recorded with pneumatic tires is twice the static weight. A worn solid rubber tire has been found to give impact equivalent to seven times the static weight.

Where to Get Information

The following publication may be obtained free of charge from the U.S. Department of Agriculture, Washington, D. C.

Public Roads Vol. 5. No. 9 November, 1924 Status of the Motor Truck Impact Tests of the Bureau of Public Roads